



THE LAKEHEAD AMATEUR RADIO CLUB JOURNAL

January 2006

HI-Q



VE3FW—LARC call sign honours the memory of the Founding President P.J. "Pat" O'Shea

Best Wishes for 2006 !!!

Annual Dinner and Meeting will be held at the
Slovak Legion Sun Room on
Saturday, February 11, 2006 starting at 1800 hours.

Symposium at 18:00 hrs and Dinner at 18:30 hours

TICKETS FOR DINNER ARE NOW AVAILABLE FROM THE FOLLOWING MEMBERS:

Brad Harris VE3MXJ	Bob Hansen VE3RVA
Joe Coghlan VE3TBX	John Sacek VA3JMS
Fort Michelizzi VE3MCZ	Leo Wehrstedt VE3ATC

Tickets are \$25.00 per person. A cash bar is available

A Guest Speaker has been arranged

Purchase your tickets now!

Inside this issue:

Antenna Season	2
Financial Report	2
Last Meeting Minutes	3
Amateur Radio Emergency Service- What is It?	4
QRP -A Learning Experience	5
NW Ont. Repeaters List	7
NCS -Friday Night Net	7
Editors QSK...	8
Confucius Say...	8
Club Executive	9
Public Service	9
Club Information	9
Membership Form	10

Ham Radio Classes

Starting on January 19 at 7:00 PM the annual Lakehead Amateur Radio Club will again be starting their radio classes. They will run for 2 hours each Thursday (excepting the second Thursday) from 7 to 9 PM. They will probably go till April. The cost this year is \$25 for students and \$40 for everyone else.

In addition to covering the cost of the classes you will also get an associate membership in the LARC. If you want to purchase a text several are available including the excellent one from Radio Amateurs of Canada.

If you have any questions please give me a call at 344 1848.

Hope to see you on the 19th.

Bill VE3XT

LARC OPEN ACCESS REPEATERS

VE3YQT	Mount Baldy	147.060 (-600) Phone Patch
VE3TBR	St. Joseph's	146.820 (-600) 442.075 (+5 MHz)
VE3BGA	Hillcrest H.S.	145.450 (-600) (IRLP Node VA3LU 123.0 Hz) 442.825 (+5 MHz) (100.0 Hz)
VE3UPP	Upsala	145.470 (-600)

- Next Meeting
Thursday
January 12, 2006 at
the McIntyre Building,
Confederation College
Room 191 at 7:30 pm
- Amateur Radio
Classes begin Jan 19,
2006 at Confederation
College contact:
Bill, VE3XT at
344-1848
- Annual LARC dinner
meeting will be held
Saturday, Feb 11,
2006 at the Slovak



Antenna Season Starts!



Norm **VE3XRC**, officially opens the 2005—2006 antenna and tower season with a mighty blast from his trumpet (horn?) at the December 2005 meeting.

With snow now on the ground, and looking permanent for the next several months, it was impossible to hold back any longer!

Beside Norm is Linda **VE3XLB**



Joe VE3TBX

Lakehead Amateur Radio Club Treasurers Report

Opening Balance - December 1, 2005	\$ 3,472.46
Income	
Memberships	\$ 140.00
50/50 Draw	\$ 8.75
Total Income	\$ 148.75
Expenses	
Thunder Bay Telephone	\$ 44.02
Bank Service Fee	\$ 2.50
Confederation College - Room rental	\$ 60.00
Web Site Fee Rental	\$ 42.80
Web Site Fee Setup	\$ 100.53
Annual Dinner - Ticket Printing	\$ 17.25
Annual Dinner - Deposit - Slovak Legion	\$ 50.00
Bank - Cheques & Deposit Slips	\$ 109.64
Total Expenses	\$ 426.74
Closing Balance - January 5, 2006	\$ 3,194.47

**Joe - VE3TBX
Treasurer**



LARC December 8, 2005 MINUTES

Terry, VA3LU



Terry VA3LU

December 8, 2005

Minutes of Meeting

Meeting called to order by Vice President Bob **VE3RVA** at 7.38 PM

Members in attendance: 28

Minutes of last meeting:

As printed in December 1, 2005 Hi-Q Moved by Bob **VE3BHN** and seconded by Glen **VE3ICY** to be accepted.

Motion carried

Treasurer report:

As presented by Treasurer Joe **VE3TBX**, Motion by Joe **VE3TBX** and seconded by Manuel **VE3MPT** that treasurer report be accepted.

Motion carried.

Committee reports:

Terry **VA3LU** on LARC equipment no changes, Norm **VE3XRC** Sibley Ski Tour first Sat. in March. Mike **VE3ZG** on the LARC Trailer.

OLD Business:

Leo **VE3ATC** on the change over of LARC WebPages to a commercial servers.

There was a Round table as Bob was busy for a few minutes on the phone.

Bob **VE3RVA** on the LARC annual Dinner 25.00 Dollars a person at the Slovak Legion. Bob **VE3RVA**, Joe **VE3TBX** and Leo **VE3ATC** have tickets.

NEW Business:

The cost of carrying insurance is getting out of line and we are to check into RAC new insurance plans. To be discussed again at next meeting.

Budgets for 2005 2006:

Presented by Joe **VE3TBX**, Moved by Joe **VE3TBX** and seconded by Norm **VE3XRC** to be accepted as presented. Motion Carried.

As in the LARC traditions of opening Antenna season Norm **VE3XRC** blew the Horn to officially open Antenna Season.

Discussion on the feast ability of sending Hi-Q out to everyone in Thunder Bay by Pat **VE3PD**, discussion follows no clear answer yet.

50/50 draw won by Clarence **VE3WCW**

Motion to adjourn by Norm **VE3XRC**

Amateur Radio Emergency Service-What is It?

ARES is composed of licensed radio amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public service, when disaster strikes. Every licensed radio amateur, whether or not a member of RAC or any other local or regional organization, is eligible for membership in the Amateur Radio Emergency Service. The only qualification is a sincere desire to serve. The possession of emergency-powered equipment is desirable, but not a requirement. (From RAC website)

With the internet, Echolink, satellite phones and cellular phones the number of QNI (check ins) to many VHF and HF A.R.E.S nets is declining and causing some concern among Net Managers as well as Net Control Station operators. Many are asking if it is worth running a net anymore. But the answer is YES it is. Radio will continue to save lives and be there when many of our newer communications modes fail us. We are a very diverse and dedicated group that can be mobile or portable in minutes and ready to take on a task at hand. We can run without electricity and use portable power. No matter how bad sunspots or solar flares can be, you can bet that one band or frequency will still allow a means of communication, again the diversity we have.

We need to utilize our spectrum as best as we can, if we do not use it, we will indeed have it taken from us by those who are willing to pay for the spectrums that we currently have for FREE. And we need to let the public know we are out there as well to help and assist in times of need, and for volunteer functions providing the communication needs at hand. This is a vital part if we are to survive. If you look south of the border, the US Government and other agencies recognize and give to the Amateur Radio Society without blinking an eye as they know and have proven their worth time and time again. Yes we are in a part of the world that does not see the types of natural and manmade disasters, but we can always be ready. So we need to think about this before we complain that we do not get any help from agencies around us and within our community, we need a proven track record of things accomplished. Without reliable data we are just another person (group) with an opinion.

We need those check ins to our NETS and practice message handling. Generate a message and pass it on to keep the N.C.S. happy and feel like he is accomplishing something on a regular basis and not wasting his/her time sitting in front of the radio. Nets run both Morse code and voice so do not be afraid to check in at some point. Read up on some net structures and format for checking in, maybe you will be asked to pass a piece of traffic. There are many nets out there across the Province. Country and the World on all bands 24 hours a day.

The Northwest ARES net meets nightly at 0015/0115 z on or near 3.750 kHz, stop by and say hello to the Net Control Station, they will appreciate it for sure. This is also a great place to meet other local and district hams and see what is happening in their part of the district.

<http://www.rac.ca/fieldorg/racares.htm>

<http://racaresontario.ca/public/documents.php>

http://racaresontario.ca/public/display_opn_info.php

Check out the links above for other information on ARES. Randy VA3OJ is our Emergency Coordinator for Woods Western District so contact him for any other information on joining ARES. If I can assist as well please do not hesitate to call me as well.

Many thanks,

Fred Lesnick VE3FAL

flesnick@tbaytel.net

Net Manager NW ARES Net 3.750 at 0015/0115z 365 days a year

District Emergency Coordinator Woods District ARES



Fred VE3FAL

**“if we do not use it,
we will indeed have it
taken from us”**



QRP—A Learning Experience

Phil -VE3AXL



Phil VE3AXL

For a year or so I have been using QRP for all of my radio activates.

QRP is defined as using 5 w of power or less, and it can mean two different things.

To most amateurs QRP is a play toy, nice, but not real radio. Real radio is 100watts plus power, an 80' tower, a 4 element beam, a speech processor etc.!

For those who have discovered QRP, it means doing more with less. You achieve the same DX, the same awards but with a lot less power.

Remember your first DX contact, the first time that you talked to another part of the world with your own radio. Now think of that same magic but instead of 100 watts you do the same thing with 1 watt or less!!

Yes I watt or less!. When you think of a 100-watt light bulb, 1 watt is less power than the average night light bulb. This isn't as bad as it sounds. Going from 100w to 5watts would be the same as going from a S9 to a S6 in signal strength. We all have had good QSO's with stations that were at that level. QRP becomes really the mindset of doing more with less.

It is not unusual to work DX and set records using 1 tenth of a watt. After using 5 watts for a while it becomes too easy, and you will find yourself lowering your power level seeking a bigger challenge.

QRP is a learning experience. As you reduce your power level you don't have the advantage of power to make that contact, so you have to develop your skills as an operator.

Timing is important. When working SSB or phone nets you will find many control stations are used to working S9 plus signals. They usually can't hear anything below S3 or S4 due to poor setup or local noise conditions. There are no pauses for weaker signals and it's like an old boys club where comments are thrown in at random and there are stations doubling on top of each other. You are going to have to time your calls and be short and snappy to be heard. You are going to get stomped on, even when the control station acknowledges you, because some dough head can't hear you, and thinks that the frequency is open.

You have to be persistent, when I first started using QRP, on nets even where I was known, I got stomped on, and there were comments, that I should get a real radio! Now that they know I will be there, and running QRP they are amazed that so much can be done with low power. Its is always fun to hear someone follow you on a net and question the net control "was that guy really only running 5 watts?"

Know your band. Most mornings I can check into the trans-provincial net on 40 m using SSB. At that time of the morning,. 6.30 to 7am, the skip is long and I copy, and work the eastern provinces quite well. Sometimes the net control in Toronto is only a S3- S4 and although I hear him quite well, at that level he will only hear bits of my signal. I have a VE2 and a VE1 that are always there. They copy me well, and will always relay to the net control. About a half an hour later the net control will hear me quite well. Timing and knowing your band is important.

I try to check into nets on a regular basis. This way I know the procedure, and if I am in the field I can quickly establish a contact if necessary.

Under difficult conditions, I can tail end a strong station, and he will acknowledge and relay for me. Most new radios have CCW, a CW mode that allows you to transmit CW on the lower sideband where many nets operate. This allows you to hear the lower sideband and have the punch of CW, which can be quite effective.

On QRP CW is the more common mode of operation. It has more punch and CW operators listen better, have better skills and usually a better setup. They are used to working the weaker stations.

(continued on next page)

**"there were
comments, that I
should get a real
radio"**



QRP - A Learning Experience — Phil VE3AXL (continued)

On CW, as on SSB, your timing is important. Your calls must be short and clear. You only have a small window to get your call heard. Long CQ's and drawn out calls will often be ignored. Your CW should be quick and well spaced. During contests, you get and be give the basic info without any repeats. If someone wants a repeat you will be asked but often they will acknowledge your report and be on to the next contact before you have time to log your contact.

Calling CQ is not as effective as search and pounce operating. It simply means that you listen for someone else calling and quickly through out your call. You must get your call when there is a lull between the stations calling.

You must be on the same frequency or where the station you are trying to work is listening. New radios have fine and narrow filters to reduce QRM, and you must be in their bandpass to be heard.

Equipment and your antenna system must be in good shape. You can't afford to waste power at 2 or 3 watts with poor coax, poor connections and SWR losses.

Antennas must be close to resonance at the frequency that you are operating at. They must be high and clear as possible. A dipole at 25 feet among the trees will not be as effective as one high and free of obstruction.

That is not to say that a lesser system will not work. There are many stations that have worked lots of DX using nothing more than an attic antenna.

Equipment

QRP radios are not toys. They often rival and outperform the average radio. Most radios are designed for CW operations, use low current and dc for power and are only on one or two bands. Much more goes into their design.

Since QRP is one of the fastest growing segments of ham radio the manufacturers have taken notice and have produced radios of a quality that were not possible a few years ago.

Since there aren't as many bells and whistles their size and costs are reduced as well. You can get a hot single band radio for a couple of hundred dollars.

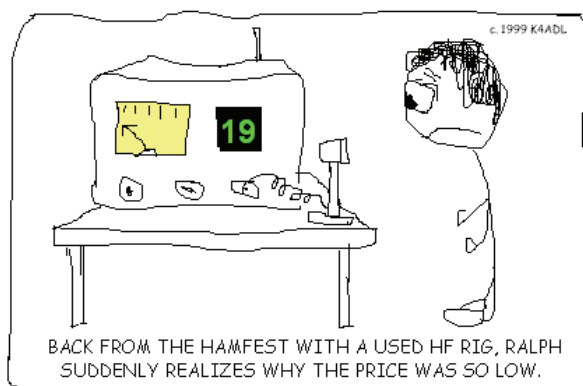
VE3XT has built a multiband radio that fits into a Sucrets box, can deliver 5 watts and runs on a 9v battery. These compact radios with low battery demand allows you the freedom to operate anywhere! A hotel room, hiking, camping even riding your bike, you can operate your radio. It opens a whole new field of fun and adventure.

A few weeks ago I checked on to the ONTARS net on 80m. Skip was long and the usual stations couldn't hear the net control. For about 15-20 minutes I was the only station that could hear and work everyone. There were lots of chuckles that morning when they had to use a remote QRP station to relay the check-ins.

On 20 m a while ago a Louisiana station was running a full KW, had a 4 element stepper Yagi antenna up at 80 ft and was calling CQ.

I tuned off frequency and returned his call. We had a good exchange and he was surprised to learn that I was running 5watts into a dipole antenna.

There are lots of contacts like that and after getting used to using QRP you will never miss that high power and costly equipment.♦





New Friday Night Net

A NEW BEGINNING:

TONIGHT STARTS A NEW ERA IN COMMUNICATIONS FROM THIS STATION, W8FWG. WE'VE MOVED OUR BULLETIN TRANSMISSION FROM WEDNESDAY NIGHT TO FRIDAY NIGHT, AND FROM THE 146.88 REPEATER IN HANCOCK TO THE 147.315 REPEATER IN KEWEENAW IN ORDER TO ENCOMPASS A WIDER AREA OF COVERAGE. USING THE KEWEENAW REPEATER WE WILL NOW REACH MARQUETTE COUNTY AND THE HAMS WITHIN. WE WILL ALSO EXTEND COVERAGE TO A PORTION OF ONTONAGON COUNTY, AND WE WELCOME RECEPTION REPORTS FROM THESE NEW AREAS.

THIS NEW SERVICE IS SPONSORED BY THE KEWEENAW COUNTY REPEATER ASSOCIATION OVER THE 147.315 (+) REPEATER. YOU WILL NEED A PL100 TONE ON YOUR RIGS IF YOU WISH TO TRANSMIT ON THE REPEATER. WE'LL BE MEETING HERE EACH FRIDAY NIGHT AT NINE.....STARTING OUT WITH THE KEWEENAW COUNTY ARES NET, ADDING THE SKYWARN NET, AND ENDING WITH THE BULLETIN TRANSMISSION BROUGHT TO YOU FROM AMATEUR RADIO NEWSLINE OF CALIFORNIA.

YOU DON'T HAVE TO BE AN A.R.E.S. MEMBER TO JOIN IN, AND YOU DON'T HAVE TO BE A MEMBER OF THE SKYWARN NET EITHER, BUT ALL RADIO HAMS ARE INVITED TO JOIN US.

WE HOPE YOU WILL ENJOY THIS COVERAGE FOR YOUR COUNTY?

P.S. Please note: The Wednesday night ARES net sponsored by the CCRAA WILL CONTINUE each Wednesday night at 9....on the "88" repeater. (It's just that the bulletin transmission is moving to Friday night).

73,

GEORGE THURNER, W8FWG

NCS - FRIDAY NIGHT NET

E-Mail: grt@pastv.net (General)

E-Mail: w8fwg@arrl.net {Amateur Radio}

U.P. Ham Directory—2006 Edition

We are taking orders now, for the 2006 edition of the U.P. Ham Directory to be published by the Copper Country Radio Amateur Association, Inc. The price is the same as last year. \$3.00 + \$2.00 for S&H. If you pick your copy up in the Copper Country you save the cost of Shipping and Handling.

We will be printing only 100 copies this year, so place your orders early to avoid missing this one.

The cutoff date for FCC information will be March 1, 2006. You may wish to publicize this in your club's newsletter.

73,

George R. Thurner, W8FWG

Chairman, U.P. Ham Directory, 2006

(906) 337-2542

E-Mail: w8fwg@arrl.net

Northwestern Ontario Repeater List

TX	RX	Location	Call	Owner
53.030	52.030	Thunder Bay	VA3OLA	VA3DPB
145.470	144.870	Upsala	VE3TBB	LARC
146.820	146.220	Fort Frances	VE3RLC	RLARC
146.820	146.220	Thunder Bay	VE3TBR	LARC
146.850	146.250	Sioux Lookout	VE3YXL	VE3UUK
146.910	146.310	Kenora	VE3YQK	VE3NHP
146.940	146.340	Sioux Narrows	VE3RSN	VE3JJA
146.940	146.340	Thunder Bay	VE3WNJ	VE3WCT
147.000	147.600	Ear Falls/Red Lake	VE3RLD	RLARC
147.030	146.430	Kenora	VE3LWR	LotWRS
147.060	146.460	Fort Frances	VE3FHS	
147.060	146.460	Longlac	VE3LLT	VE3FQH
147.060	146.460	Thunder Bay	VE3YQT	LARC
147.060	147.660	Blackhawk	VE3RBK	RLARC
147.120	147.720	Atikokan	VE3RIB	VE3JAR
147.240	147.840	Dryden	VE3DRY	DARRC
147.270	146.870	Thunder Bay	VE3RUM	VE3CX
147.390	147.990	Thunder Bay	VE3TBT	VE3TKA
147.900	147.300	Geraldton	VE3GLD	GARC
443.850	448.850	Thunder Bay	VE3TBU	VE3CX
444.825	449.825	Thunder Bay	VE3TBR	LARC

Thanks to: Wayne, **VA3WRL**



December's meeting 50/50 draw made by Derek, a prospective new amateur!

Bob **VE3RVA** holds the precious number container!

Winner was Clarence **VE3WCW**



Editors QSK...

USE IT OR LOSE IT!!!!

This applies to a lot of different things, but is a constant reminder that our ham bands are under scrutiny by other interested and potential users out there!

RAC has issued a bulletin as follows:

From: "rachq" <rachq@eton.ca>
Sent: Wednesday, December 21, 2005 8:51AM
Subject: [RAC-Bulletin] 05-023: **Canadian Amateurs to Lose 220 - 222 MHz.**

Effective 25 January, 2006, despite the protests and the efforts of Radio Amateurs of Canada, the Canadian Amateur Service will lose the 220 - 222 MHz portion of the 220 - 225 MHz band.

Details are contained in Canada Gazette Notice DGTP-004-05, "Proposals and Changes to the Spectrum in Certain Bands Below 1.7 GHz" available on the Industry Canada web site at: <http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/en/sf08494e.html>

Send comments to: rachq@rac.ca

Well, they keep pecking away on our bands and once decided, we really have little recourse, except to use what we have while we can.

Maybe we could make a New Years resolution (its not too late) to become more active and try to spend a bit more time enjoying what we do best! Lets keep our airwaves humming!

See **VE3FAL**'s excellent article on ARES in this issue, for more ideas on keeping active on the air!

Thanks to all the contributors for this months Hi-Q! Your newsletter is only as good as we all make it!

That's it for now.

Wishing all fellow amateurs a Happy, Healthy, Prosperous 2006!

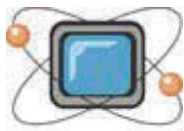
...-.-

73, Leo VE3ATC
email: ve3atc@spruce.ca

Ps. Not a writer and have a story or pictures? Contact me and I will help get it out!

ON THE WEB

thanks to
John,
VE3EMI



Rechargeable Batteries Info

http://www.steves-digicams.com/nimh_batteries.html

Which batteries are best?

<http://www.imaging-resource.com/ACCS/BATTS/BATTS.HTM>

Orbitron is a satellite tracking system for radio amateur and observing purposes. It's also used by weather professionals, satellite communication users, astronomers, UFO hobbyist and even astrologers

<http://www.stoff.pl/>

NYC Ham Ticketed for using 'cell phone' (ham radio)

<http://www.eham.net/articles/12676>

Next regular meeting

Thursday

January 12, 2006

McIntyre Building, Confederation College

Room 191 **7:30 pm**

Multimeter Seminar

At the January meeting of the LARC, I will be giving a short talk on using your multimeter more effectively. I will cover the various specifications of meters and what they mean. If you have a meter and you want to put it through its paces please bring it to the meeting on Thursday, January 12 and we will check it out.

Bill **VE3XT**

CONFUCIUS SAY.....

Confucius say...

"**Man who drive like hell, bound to get there!.**"

Confucius Say...

"**Man who have last laugh, not get joke.**"

Confucius Say...

"**He who thinks only of number one must remember this number is next to nothing.**"

THE LAKEHEAD AMATEUR RADIO CLUB JOURNAL

LARC—Suite 184
1100C Memorial Ave.
Thunder Bay, Ontario
Canada P7B 4A3

Club E-mail: VE3FW@rac.ca

LARC Website

<http://www.larclub.net>

Hi-Q Editor and Publisher

E-mail: ve3atc@spruce.ca
Leo VE3ATC 939-1020

Hi-Q is published monthly on the Sunday preceding the monthly meeting. Monthly meetings are held on the second Thursday of each month, except for July and August. Your submissions are welcome at any time. Submit early to ensure publication in next issue! Send to editor at ve3atc@spruce.ca



LARC is a member of [RAC](#)

LARC PUBLIC SERVICES

ARES

District Emergency Coordinator

VE3FAL Fred Lesnick 577-0789

Emergency Coordinator

VA3OJ Randy Gottfred 474-0910

CANWARN

VA3JMS John 767-3631

VE3MXJ Brad 767-0628

PUBLIC SERVICE EVENTS

VE3MXJ Brad 767-0628

VA3JMS John 767-3631

RAC

[Radio Amateurs of Canada](#)

LARC SENATE

Keith Fiske
Pat Doherty
Dave Kimpton
Laurie Bridgett

VE3JQ
VE3PD
VE3AVS
VE3BCD

LARC EXECUTIVE 2005—2006

President

John Sacek VA3JMS 767-3631

Vice-President

Bob Hansen VE3RVA 767-6924

Secretary

Terry Stewardson VA3LU 577-9439

Treasurer

Joe Coghlan VE3TBX 344-6566

Directors

Brad Harris VE3MXJ 767-0628

Manuel MIGUELS VE3MPT 475-5686

Fort Michelizzi VE3MCZ 475-0971

Mark Vaillant VA3MVR

Past President

Bill Unger VE3XT 344-1848

About LARC

Lakehead Amateur Radio Club members have all levels of interest and knowledge in the wide spectrum of amateur radio.

Monthly meetings and contact with other members allow us to share and discuss different ideas, and to learn from each other.

LARC membership meetings are held the second Thursday of each month, September through June at 7:30 PM local time at the McIntyre Building, Confederation College Room 191

Each meeting consists of a mix of technical and light-hearted topics, with a break for meeting friends and new friends.

Anyone with an interest in ham radio is invited to join us.

Amateur radio classes are also administered by LARC to help you with your Amateur Radio License

contact any of the Executive members above for more information



2005/2006 MEMBERSHIP/RENEWAL APPLICATION

**LAKEHEAD AMATEUR RADIO CLUB INC
1100C MEMORIAL AVE, SUITE 184,
THUNDER BAY, ONT P7B4A3**

CLASS OF MEMBERSHIP

FULL MEMBERSHIP \$35.00-open only to licensed amateurs

NAME: _____ **EMAIL:** _____

ADDRESS: _____ **CITY** _____

TELEPHONE: () _____ **POSTAL CODE** _____

MAY WE PUBLISH THE PHONE NUMBER yes / no

MAY WE DELIVER HI-Q BY E-MAIL? yes / no

CALL(S) _____

FAMILY MEMBERSHIP- immediate family residing at the same address holding licenses.
\$35.00 plus \$10.00 for each additional amateur.

NAMES AND CALLS _____

**STUDENT MEMBERSHIP- \$15.00-open to persons enrolled full time in an education
facility, list School and program** _____

ASSOCIATE MEMBERSHIP-\$20.00-upon approval of the Board and open to:

1)Non holders of an amateur radio license.

2)Licensed amateurs living outside the immediate Thunder Bay area or are unable to attend regular meetings of the club.

If you feel you qualify for associate membership, please indicate why, on a separate sheet, to be used by the Board to consider your application.

Please mail or bring this form to the next meeting with your cash or cheque for membership fees.

Cheques should be made payable to Lakehead Amateur Radio Club.

Applications and cheques can also be dropped off at the above address.